IN THE CLAIMS:

1. (Currently Amended) A flow management system, comprising:

a first panel having a first fluid pathway ~~for passing a first fluid,~~ the first panel comprising a first compartment ~~to receive a volume of the first fluid~~;

a second panel having a fluid pathway ~~for passing a second fluid~~, the second panel comprising a second compartment ~~to receive a volume of the second fluid,~~ ;

the first and second panels being aligned [[so]] such that the first compartment overlays the second compartment and, as a result, adjacent exterior surfaces of said first and second panels are positioned opposite each other;

~~the second compartment communicating with at least a third channel;~~

at least one support element defining a recess with at least one interior surface into which the first and second compartments are disposed [[so]] such that the first and second compartments share a limited interior volume of said support, whereby expansion of one of said first and second compartments causes the other of said first and second compartments to be compressed ~~second compartment bears against the second surface as the second fluid fills the second compartment and forces the first fluid out from the first compartment as the first compartment bears against the first surface so that the first fluid passes out through the first channel as the second fluid passes in through the third channel without mixing of the first and second fluids~~.

2. (Currently Amended) The flow management system of claim 1, wherein the first panel further comprises a third compartment ~~to receive a volume of the first fluid~~.

3. (Currently Amended) The flow management system of claim 1, wherein the second panel further comprises a fourth compartment ~~to receive a volume of the second fluid~~.

4. (Currently Amended) The flow management system of claim 1, wherein the panels define a single element joined by a fold ~~are aligned by folding~~.

5. (Original) The flow management system of claim 1, wherein the panels are die cut and overlay one another.

6. (Original) The flow management system of claim 1, wherein the panels are flexible.

7. (Original) The flow management system of claim 1, wherein each panel has a pattern of seals.

8-9. (Canceled)

10. (Currently Amended) A flow management system, comprising: a first panel having a fluid pathway ~~for passing a first fluid~~, the first panel comprising a first compartment ~~to receive a volume of the first fluid~~, the first compartment communicating with first and second channels; and

a second panel having a fluid pathway ~~for passing a second fluid~~, the second panel comprising a second compartment ~~to receive a volume of the second fluid~~, the second compartment communicating with third and fourth channels, the panels being aligned so that the first compartment overlays the second compartment and, as a result, adjacent exterior surfaces of said first and second panels are positioned opposite each other; a support to hold said first compartment against said second compartment ~~so that the first fluid passes out through the first channel as the second fluid passes in through the third channel without mixing of the first and second fluids~~ such that said first compartment is compressed as a result of said second compartment expanding against said first compartment.

11-12. (Canceled).

13. (Currently Amended) The flow management system of claim 10, wherein the first panel further comprises a third compartment ~~to receive a volume of the first fluid~~.

14. (Currently Amended) The flow management system of claim 10, wherein the second panel further comprises a fourth compartment ~~to receive a volume of the second fluid~~.

15. (Previously Presented) The flow management system of claim 10, wherein the panels define a single folded element joined at a line of folding.

16. (Previously Presented) The flow management system of claim 10, wherein the panels are formed of two parallel sheets.

17. (Original) The flow management system of claim 10, wherein the panels are flexible.

18. (Original) The flow management system of claim 10, wherein each panel has a pattern of seals.

19-20. (Canceled).

21. (Currently Amended) A flow management system, comprising: a first panel having a fluid pathway for passing a first fluid, the first panel comprising a first compartment to receive a volume of the first fluid, the first compartment communicating with first and second channels; a second panel having a fluid pathway for passing a second fluid, the second panel comprising a second compartment to receive a volume of the second fluid, the second compartment communicating with third and fourth channels, ~~the second panel comprising a second compartment to receive a volume of the second fluid, the second compartment communicating with third and fourth channels,~~ the panels being aligned so that the first compartment overlays the second compartment, a support to hold said first compartment against said second compartment so that the first fluid passes out through the first channel as the second fluid passes in through the third channel without mixing of the first and second fluids as a result of said second

compartment expanding against said first compartment; the first channel overlays the third channel, and the second channel overlays the fourth channel; and a releasable clamp that bears against the first channel and the third channel to close the first and third channels.

22. (Original) The flow management system of claim 21, wherein the releasable clamp is a solenoid clamp.

23. (Original) The flow management system of claim 21, wherein the releasable clamp is a spring loaded clamp.

24. (Original) The flow management system of claim 21, wherein the first fluid from the first compartment is displaced as the second fluid fills the second compartment.

25. (Original) The flow management system of claim 21, further comprising a first surface and a second surface defining a gap, the first and second compartments disposed within the gap so that the second compartment bears against the second surface as the second fluid fills the second compartment and forces the first fluid out from the first compartment.

26-32 (Canceled).

33. (Currently Amended) A flow management system, comprising:

first and second ~~fluid separate compartments~~ flexible ~~fluid chambers~~ members with respective inner compartments each with an inlet and an outlet;

a support to hold said first and second flow compartments against each other such that adjacent exterior walls thereof are held in contact with each other while allowing them to expand by filling with fluid;

said support having actuators configured to selectively seal said respective inlets and outlets such that fluid fills said first compartment and is forced out of said second fluid compartment as said first fluid compartment fills and expands against said second during a first time and such that fluid fills said second compartment and is forced out said first fluid compartment as said second fluid compartment fills and expands against said first during a second time.

34. (Previously Presented) A flow management system as in claim 33, wherein said first compartment inlet and said second compartment outlet are held in an overlapping arrangement such that both may be closed simultaneously with a first of said actuators.

35. (Previously Presented) A flow management system as in claim 34, wherein said second compartment inlet and said first compartment outlet are held in an overlapping arrangement such that both may be closed simultaneously with a second of said actuators.